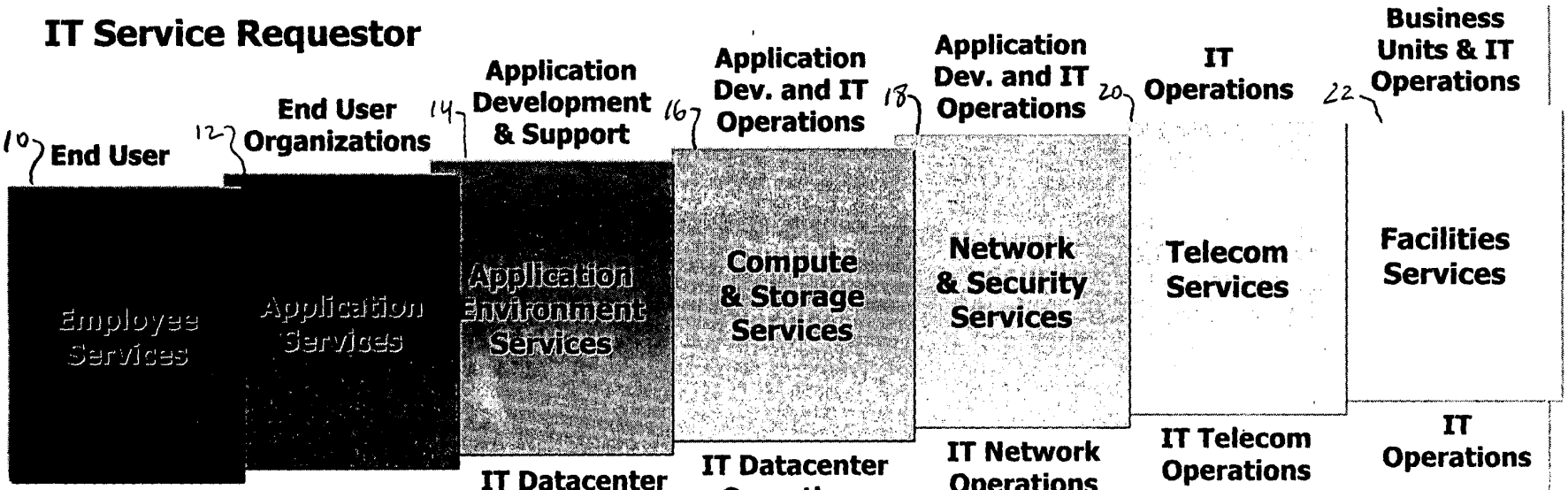
Centrata IT Services Catalog (Reference Implementation)



- "New Employee"
- "Move Employee"
- Email Account
- Password reset
- Printer setup
- Desktop computer
- Telephony
- Voicemail
- FAX
- Application Access
- VPN access
- Desktop training

- Financial Apps
- ERP Applications
- CRM Applications
- Decision Support
- Custom Web Apps
- App configuration
- Output Mgt
- Job scheduling
- App support
- App tuning
- App upgrades
- Application training

- Production environment for package apps
- Production environment for custom apps
- Stage environments
- Development environments
- Stress test environments

- App servers
- DB servers
- File servers
- DASD storage
- NAS storage
- Backup
- Cluster config
- Internal servers
- App monitoring
- Sys monitoring
- Storage redundancy

- WAN Routers
- Campus Routers
- Core Switches
- LAN Switches
- Firewalls
- DNS Servers
- Directory Servs.
- Intrusion detect
- VLAN/RAS
- Authentication
- ISP Access
- Bandwidth

- PBX
- Voicemail
- VoIP
- Phones
- Calling Cards
- Audio conference
- Video Conferencing
- Voice network
- Carrier connection

- Office setup
- Office moves
- Datacenter setup
- Datacenter relocation
- Space mgt
- Physical disaster recovery

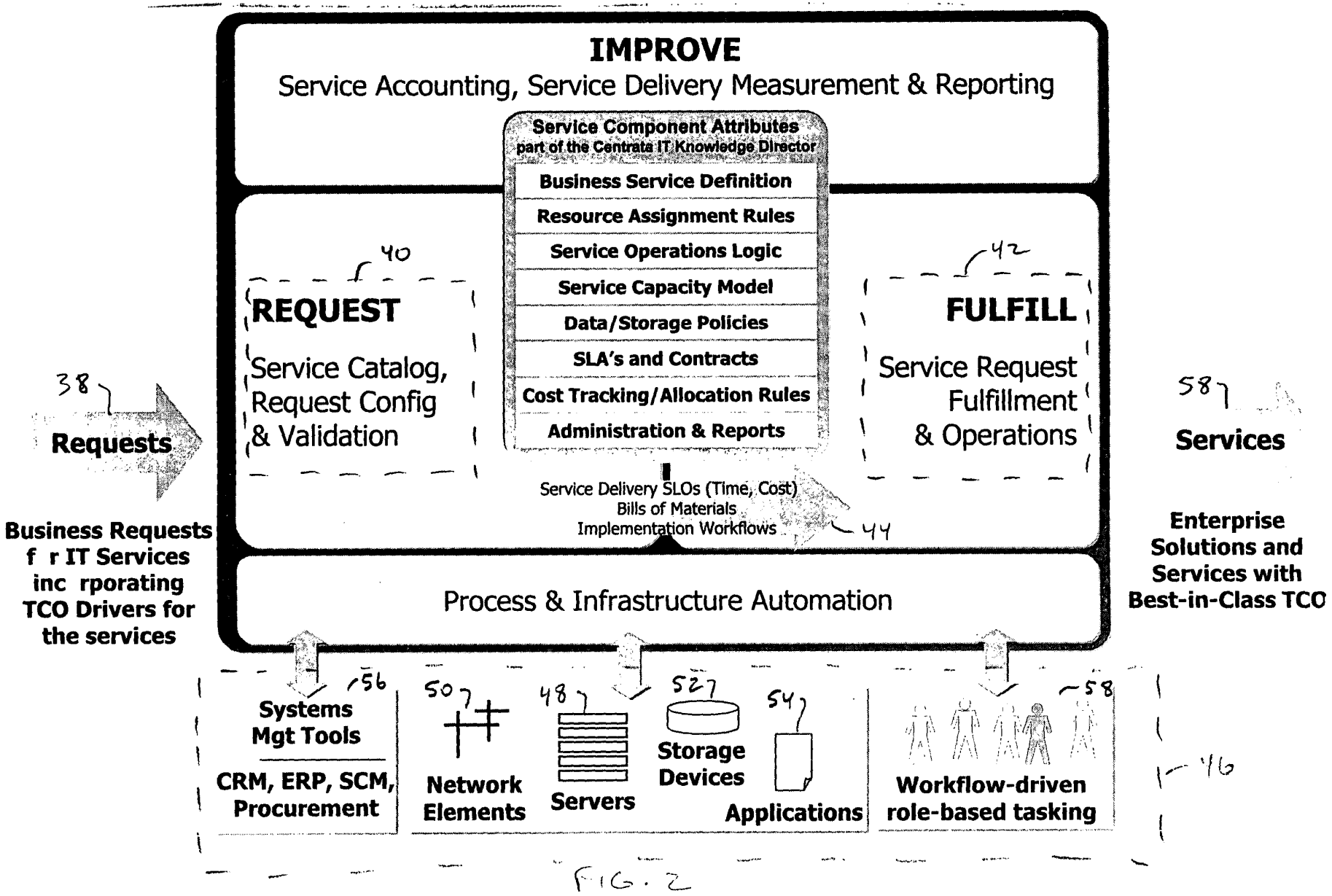
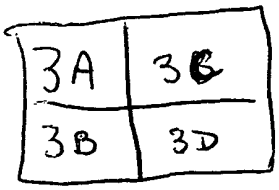

IMPROVE
Service Accounting, Service Delivery Measurement & Reporting
Service Component Attributes
part of the Centrata IT Knowledge Director
Business Service Definition
Resource Assignment Rules
Service Operations Logic
Service Capacity Model
Data/Storage Policies
SLA's and Contracts
Cost Tracking/Allocation Rules
Administration & Reports
40
REQUEST
Service Catalog, Request Config & Validation
42
FULFILL
Service Request Fulfillment & Operations
38
Requests
Business Requests for IT Services incorporating TCO Drivers for the services
58
Services
Enterprise Solutions and Services with Best-in-Class TCO
Service Delivery SLOs (Time, Cost)
Bills of Materials
Implementation Workflows
44
Process & Infrastructure Automation
56
Systems Mgt Tools
CRM, ERP, SCM, Procurement
50
Network Elements
48
Servers
52
Storage Devices
54
Applications
58
Workflow-driven role-based tasking
46

FIG. 2

PROCESS CARRIED OUT BY A COMPUTER TO INTERACT WITH AN IT PROFESSIONAL TO BUILD A SERVICE CATALOG



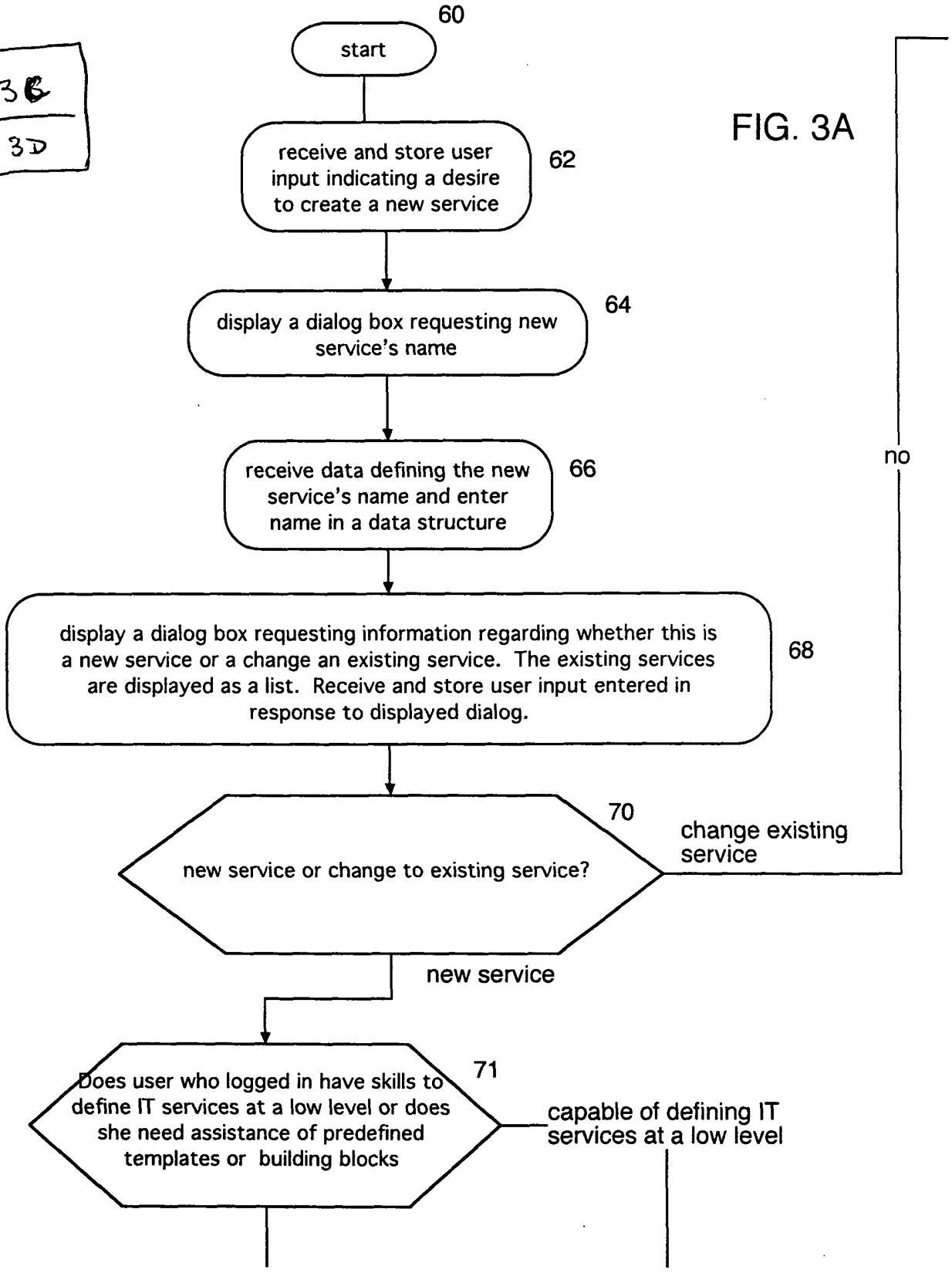


FIG. 3A

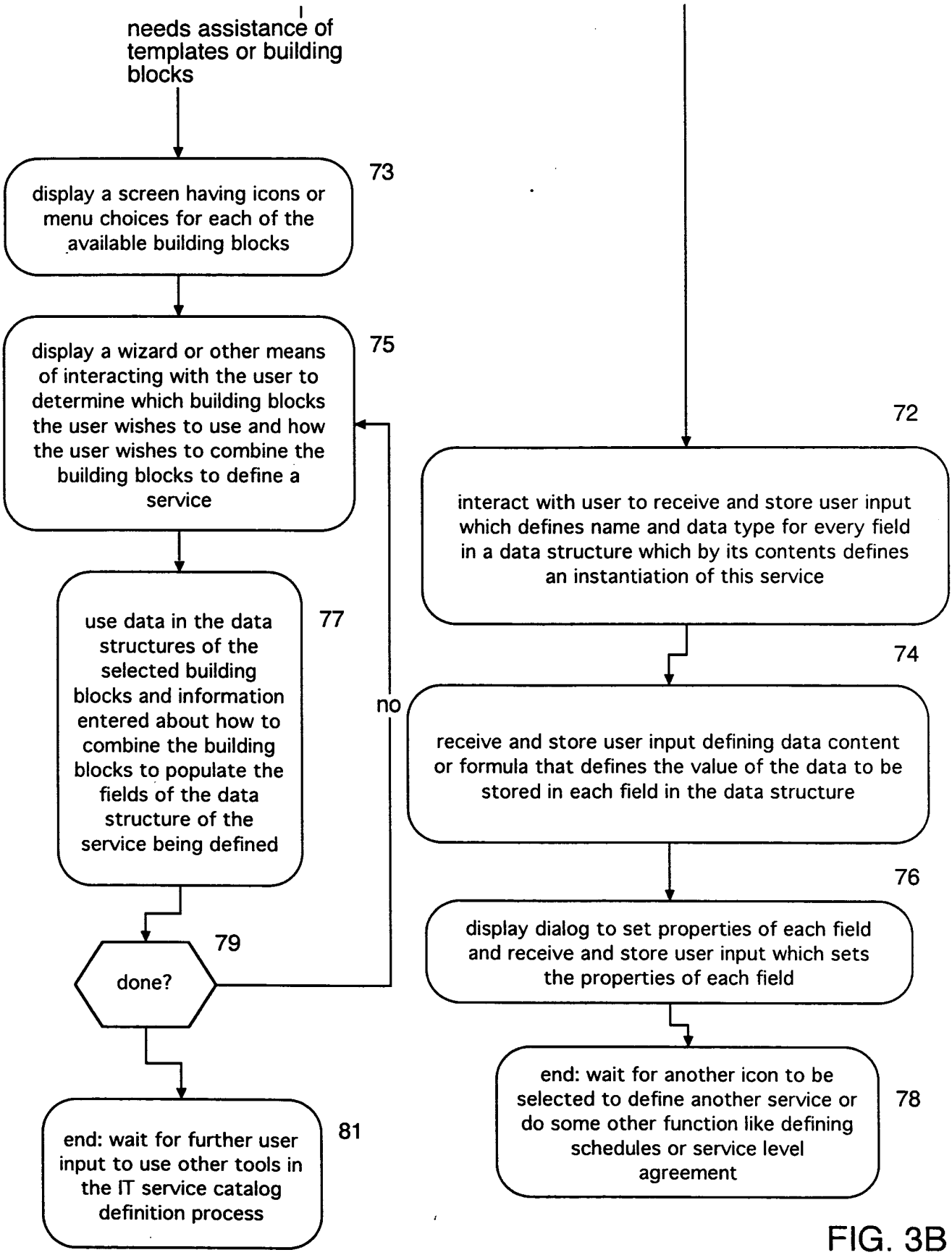

needs assistance of templates or building blocks
73
display a screen having icons or menu choices for each of the available building blocks
75
display a wizard or other means of interacting with the user to determine which building blocks the user wishes to use and how the user wishes to combine the building blocks to define a service
77
use data in the data structures of the selected building blocks and information entered about how to combine the building blocks to populate the fields of the data structure of the service being defined
79
done?
no
81
end: wait for further user input to use other tools in the IT service catalog definition process
72
interact with user to receive and store user input which defines name and data type for every field in a data structure which by its contents defines an instantiation of this service
74
receive and store user input defining data content or formula that defines the value of the data to be stored in each field in the data structure
76
display dialog to set properties of each field and receive and store user input which sets the properties of each field
78
end: wait for another icon to be selected to define another service or do some other function like defining schedules or service level agreement

FIG. 3B

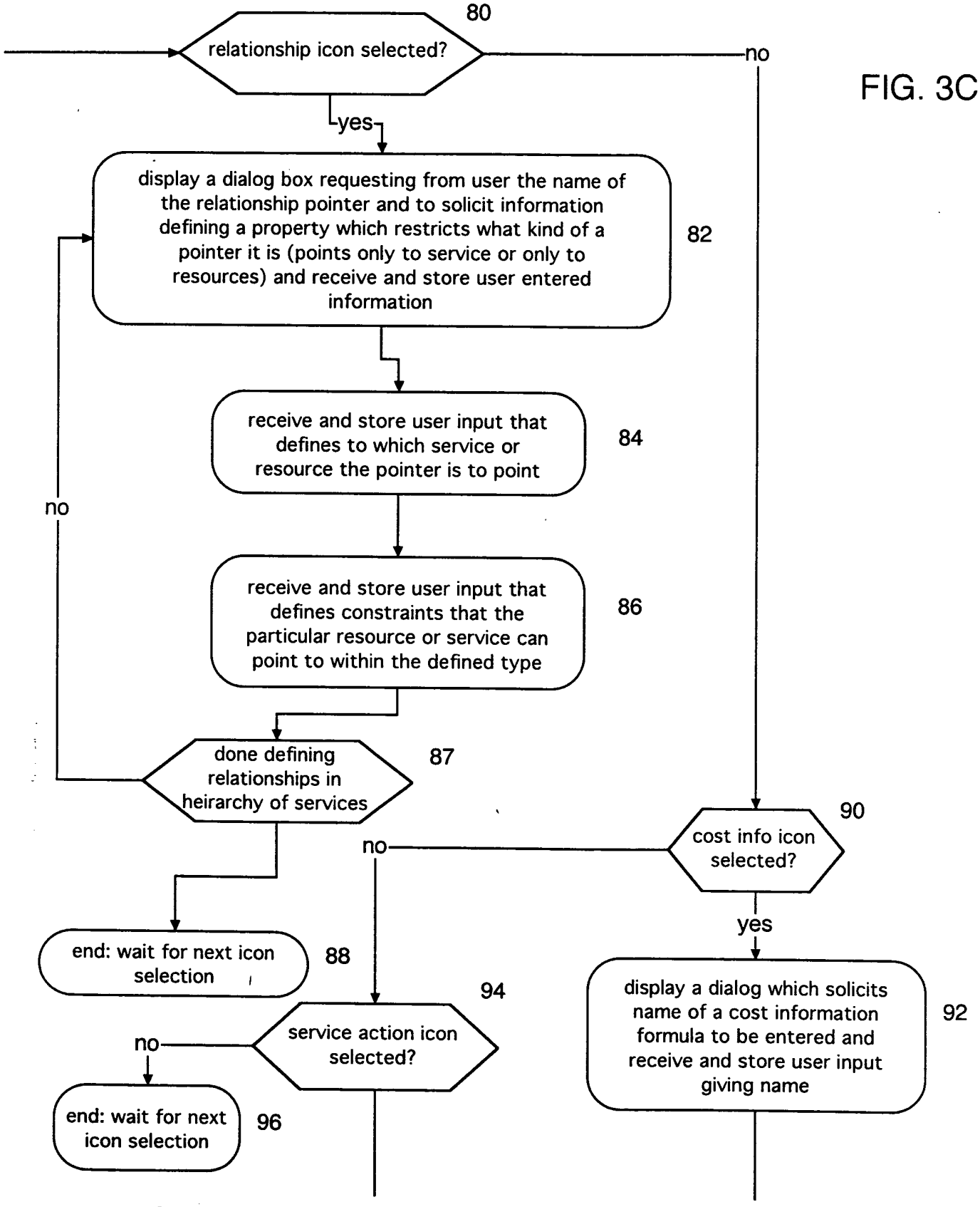

80
relationship icon selected?
no
yes
display a dialog box requesting from user the name of the relationship pointer and to solicit information defining a property which restricts what kind of a pointer it is (points only to service or only to resources) and receive and store user entered information
82
receive and store user input that defines to which service or resource the pointer is to point
84
no
receive and store user input that defines constraints that the particular resource or service can point to within the defined type
86
done defining relationships in heirarchy of services
87
90
cost info icon selected?
no
yes
end: wait for next icon selection
88
94
service action icon selected?
no
end: wait for next icon selection
96
display a dialog which solicits name of a cost information formula to be entered and receive and store user input giving name
92

FIG. 3C

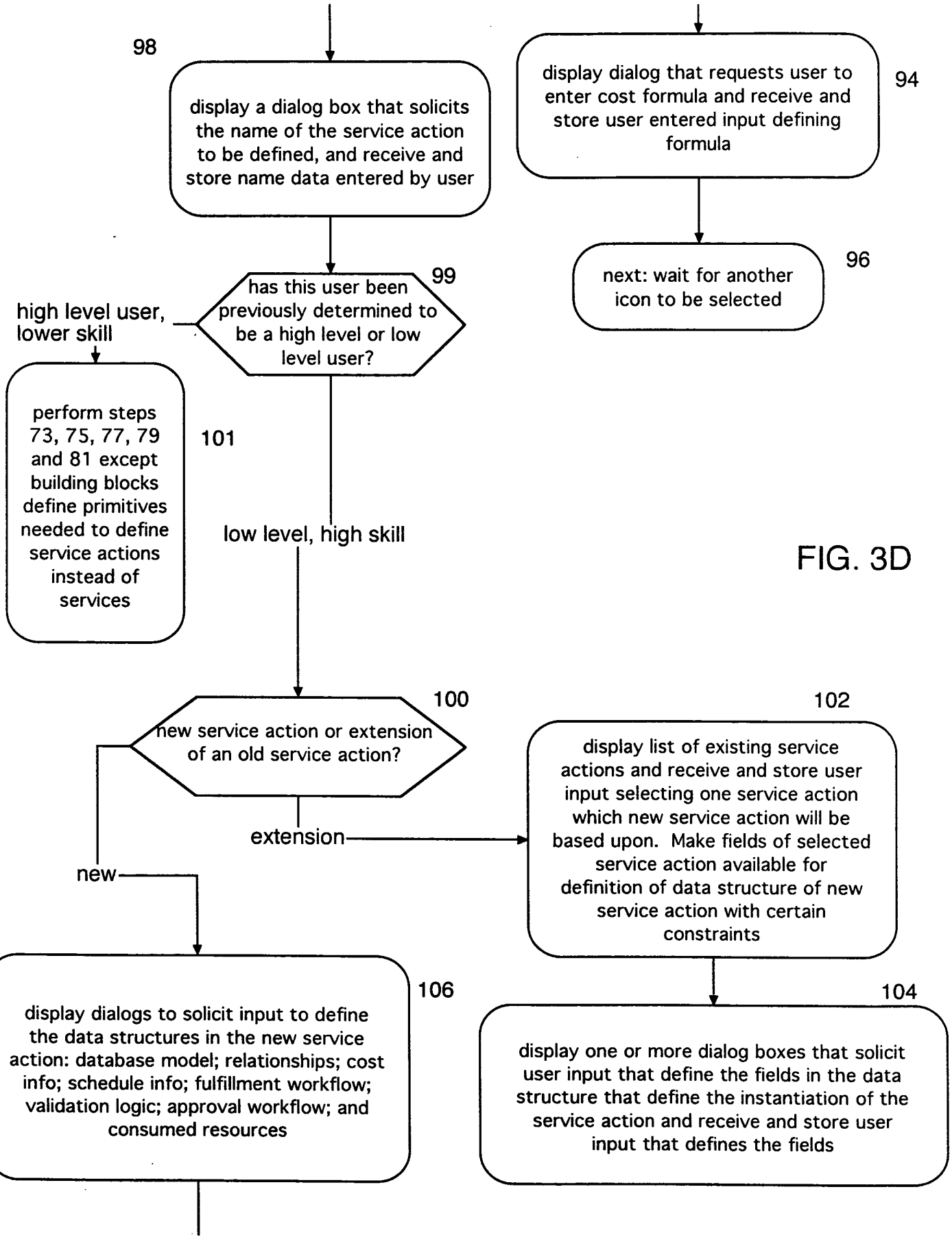
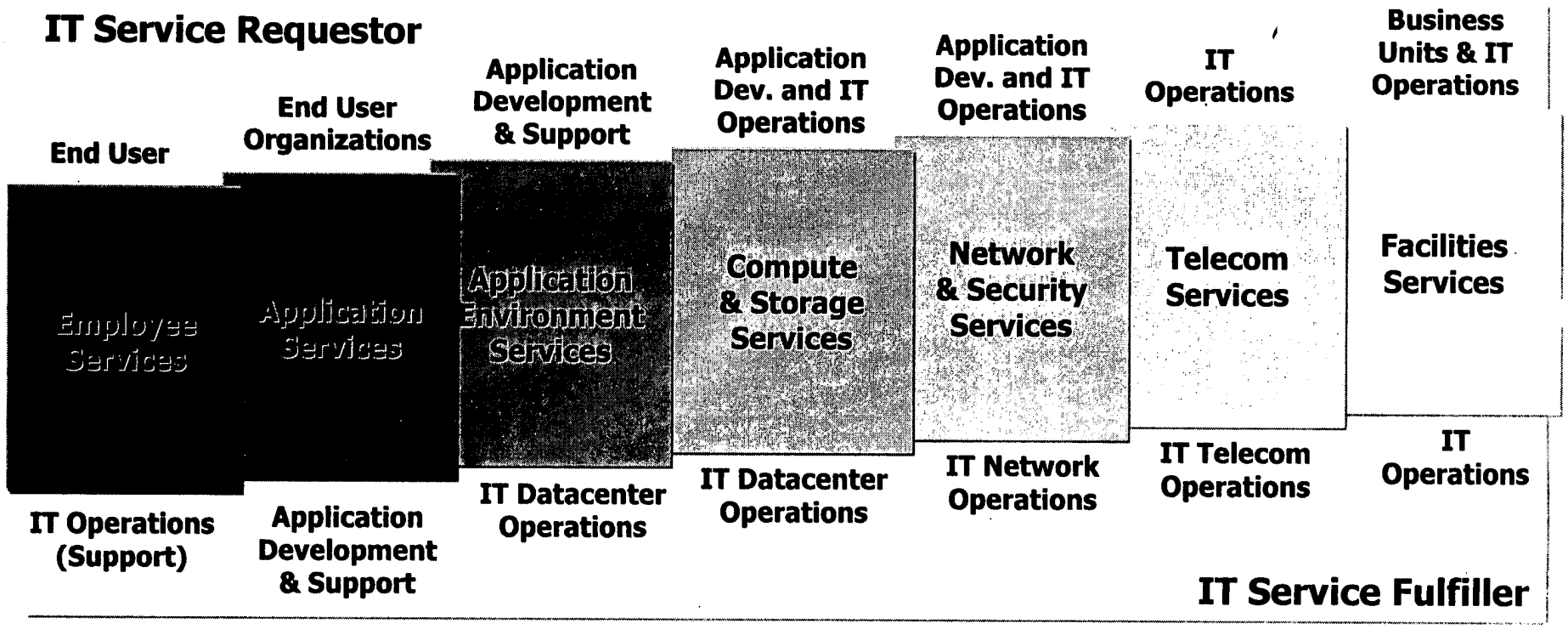

98
display a dialog box that solicits the name of the service action to be defined, and receive and store name data entered by user
99
has this user been previously determined to be a high level or low level user?
high level user, lower skill
perform steps 73, 75, 77, 79 and 81 except building blocks define primitives needed to define service actions instead of services
101
low level, high skill
100
new service action or extension of an old service action?
extension
new
display dialog that requests user to enter cost formula and receive and store user entered input defining formula
94
next: wait for another icon to be selected
96
102
display list of existing service actions and receive and store user input selecting one service action which new service action will be based upon. Make fields of selected service action available for definition of data structure of new service action with certain constraints
104
display one or more dialog boxes that solicit user input that define the fields in the data structure that define the instantiation of the service action and receive and store user input that defines the fields
106
display dialogs to solicit input to define the data structures in the new service action: database model; relationships; cost info; schedule info; fulfillment workflow; validation logic; approval workflow; and consumed resources

FIG. 3D


IT Service Requestor
End User
End User Organizations
Application Development & Support
Application Dev. and IT Operations
Application Dev. and IT Operations
IT Operations
Business Units & IT Operations
Employee Services
Application Services
Application Environment Services
Compute & Storage Services
Network & Security Services
Telecom Services
Facilities Services
IT Operations (Support)
Application Development & Support
IT Datacenter Operations
IT Datacenter Operations
IT Network Operations
IT Telecom Operations
IT Operations
IT Service Fulfiller

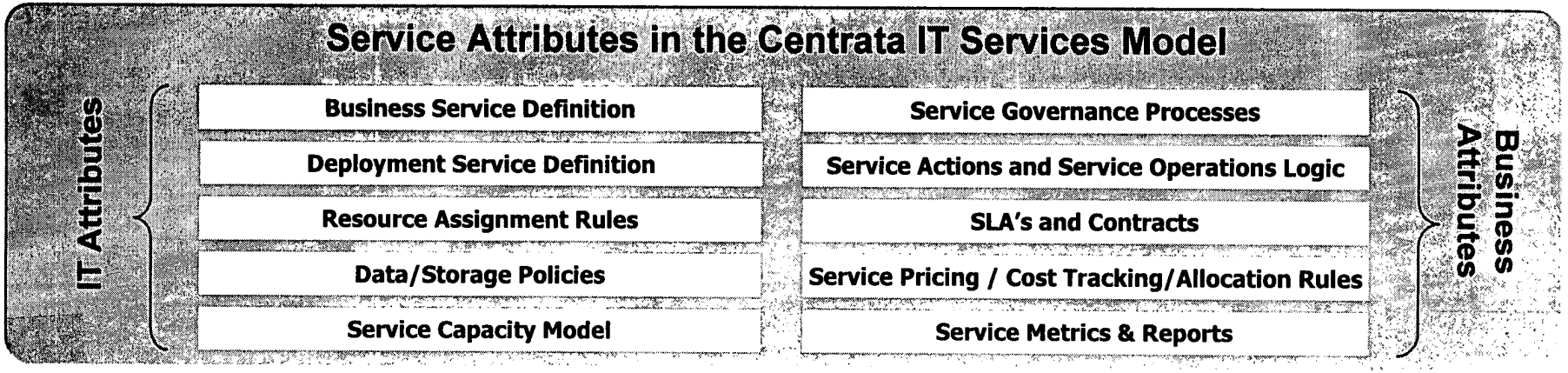

Service Attributes in the Centrata IT Services Model
IT Attributes
Business Service Definition
Deployment Service Definition
Resource Assignment Rules
Data/Storage Policies
Service Capacity Model
Service Governance Processes
Service Actions and Service Operations Logic
SLA's and Contracts
Service Pricing / Cost Tracking/Allocation Rules
Service Metrics & Reports
Business Attributes

FIG. 4

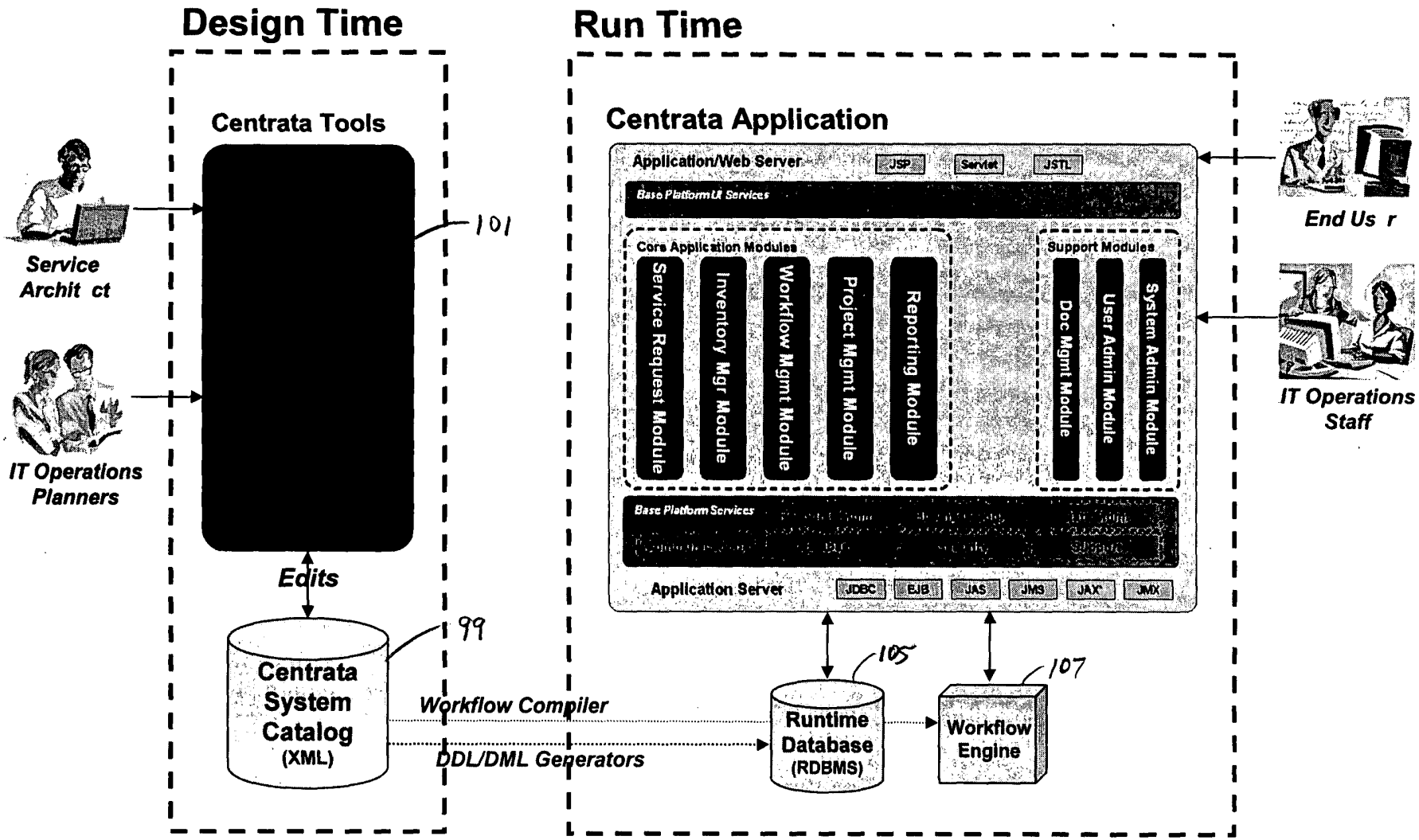
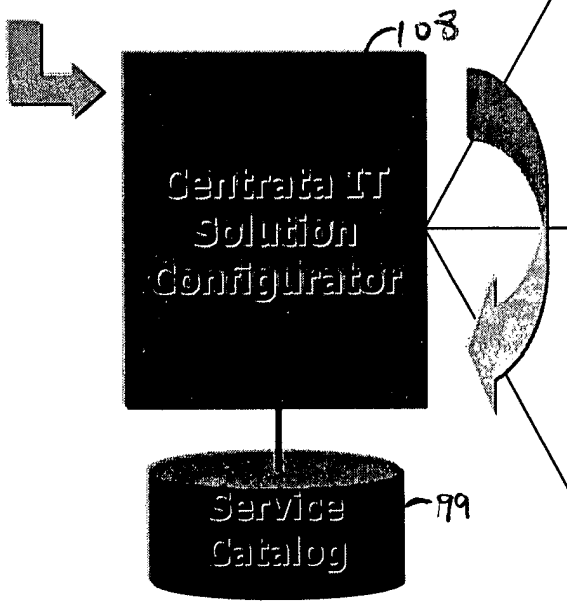

Design Time
Run Time
Centrata Tools
Centrata Application
Service Architect
IT Operations Planners
End User
IT Operations Staff
101
Application/Web Server
JSP
Servlet
JSTL
Base Platform UI Services
Core Application Modules
Service Request Module
Inventory Mgr Module
Workflow Mgmt Module
Project Mgmt Module
Reporting Module
Support Modules
Doc Mgmt Module
User Admin Module
System Admin Module
Base Platform Services
Application Server
JDBC
EJB
JAS
JMS
JAX
JMX
Edits
99
Centrata System Catalog (XML)
Workflow Compiler
DDL/DML Generators
105
Runtime Database (RDBMS)
107
Workflow Engine

FIG. 5

"New" or "Change" Project/Service Request and business requirements

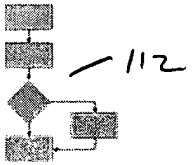


1

Project/Service Fulfillment Information

RFS's & SR's

BOM's



Workflows

2

Solution Costs (TCO)

NRE	($ 000s)
Infrastructure	2,350
Software Licenses	1,356
Application Development	4,500
Deployment	800
Total NRE	9,006

114

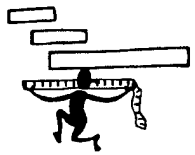
Recurring Expense (Annual)	($ 000s)
Infrastructure Maintenance	423
Software Maintenance	244
7x24 Support	450
Application Support	1,801
Total Recurring	2,919

116

Development, deployment, maintenance

3

Delivery and Quality Metrics



Six Sigma and other project governance and delivery metrics

Solution request configuration process is iterative
Each output type can be fine-tuned by changing request configuration parameters

- Side-by-side comparisons of alternative configurations and their associated cost & risk profiles are provided

FIG. 6

CONFIGURATION PROCESS TO RECEIVE AND VALIDATE USER REQUESTS FOR IT SERVICES AND CONVERT THEM TO SPECIFICATIONS FOR A FULFILLMENT PROCESS

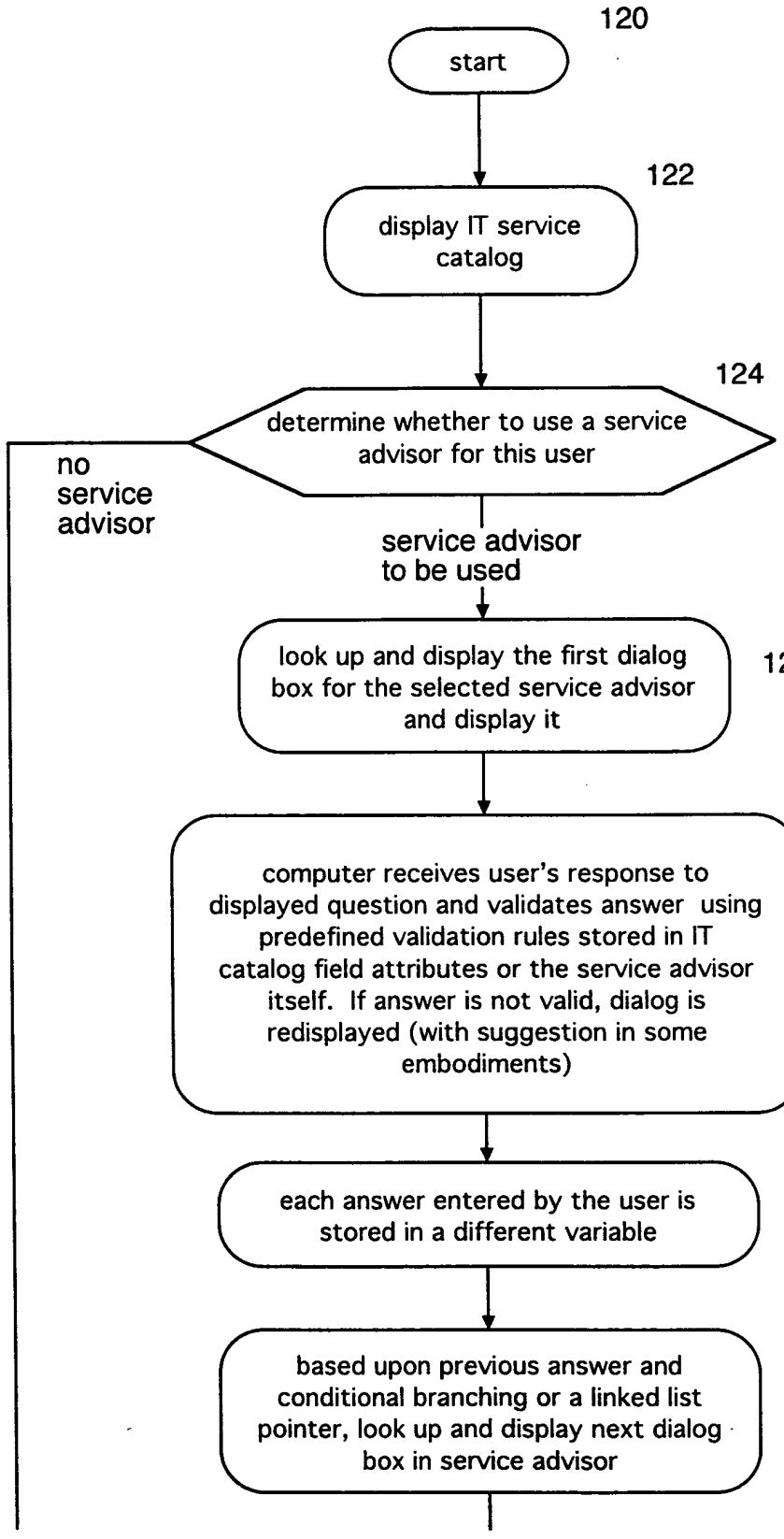


FIG. 7A

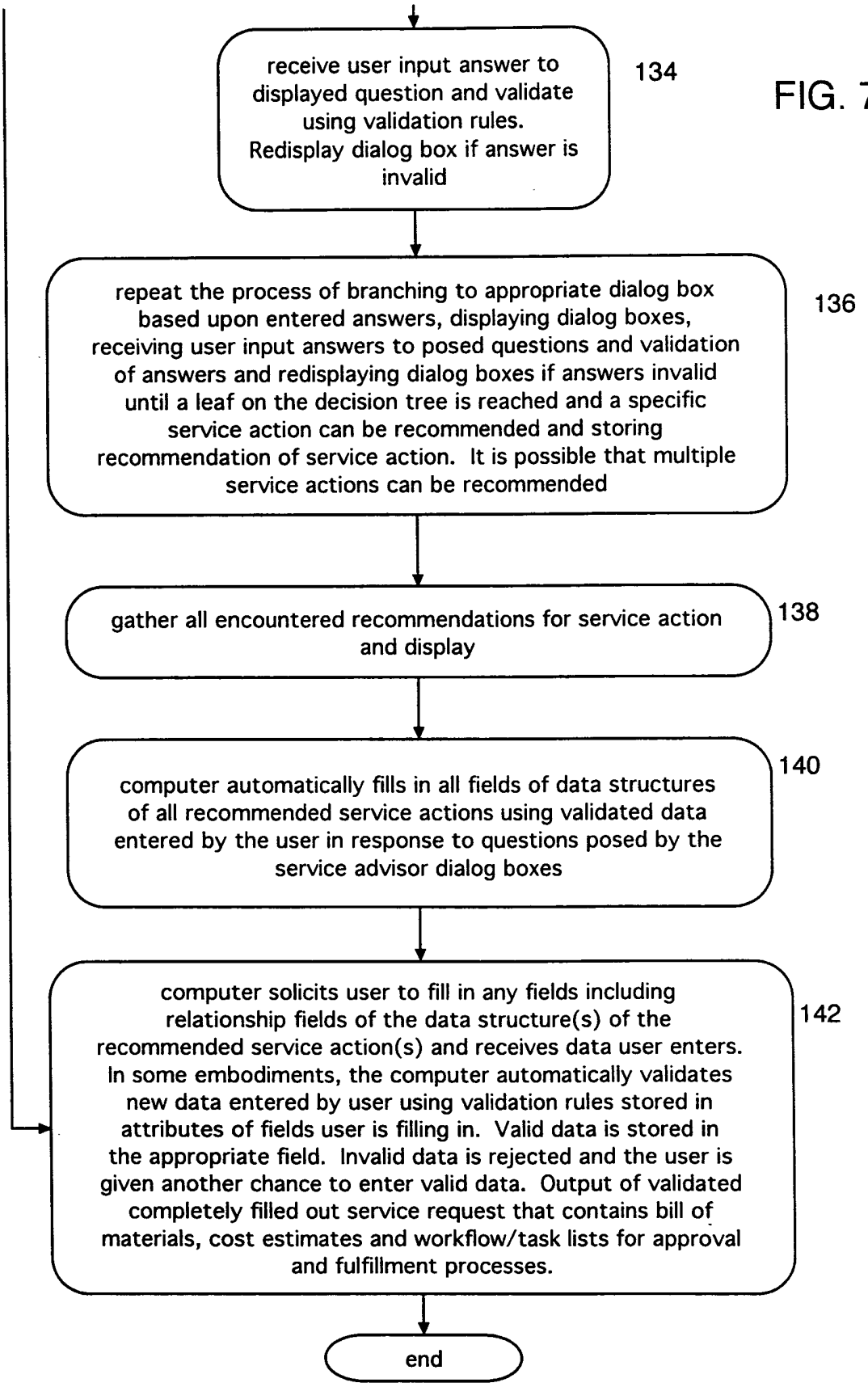

receive user input answer to displayed question and validate using validation rules. Redisplay dialog box if answer is invalid
134
repeat the process of branching to appropriate dialog box based upon entered answers, displaying dialog boxes, receiving user input answers to posed questions and validation of answers and redisplaying dialog boxes if answers invalid until a leaf on the decision tree is reached and a specific service action can be recommended and storing recommendation of service action. It is possible that multiple service actions can be recommended
136
gather all encountered recommendations for service action and display
138
computer automatically fills in all fields of data structures of all recommended service actions using validated data entered by the user in response to questions posed by the service advisor dialog boxes
140
computer solicits user to fill in any fields including relationship fields of the data structure(s) of the recommended service action(s) and receives data user enters. In some embodiments, the computer automatically validates new data entered by user using validation rules stored in attributes of fields user is filling in. Valid data is stored in the appropriate field. Invalid data is rejected and the user is given another chance to enter valid data. Output of validated completely filled out service request that contains bill of materials, cost estimates and workflow/task lists for approval and fulfillment processes.
142
end

FIG. 7B

THRESHOLD APPROVAL PROCESS TO OBTAIN MANAGEMENT APPROVAL FOLLOWED BY FULFILLMENT PROCESS TO GENERATE WORKFLOWS TO BRING INSTANCE OF REQUESTED SERVICE INTO EXISTENCE

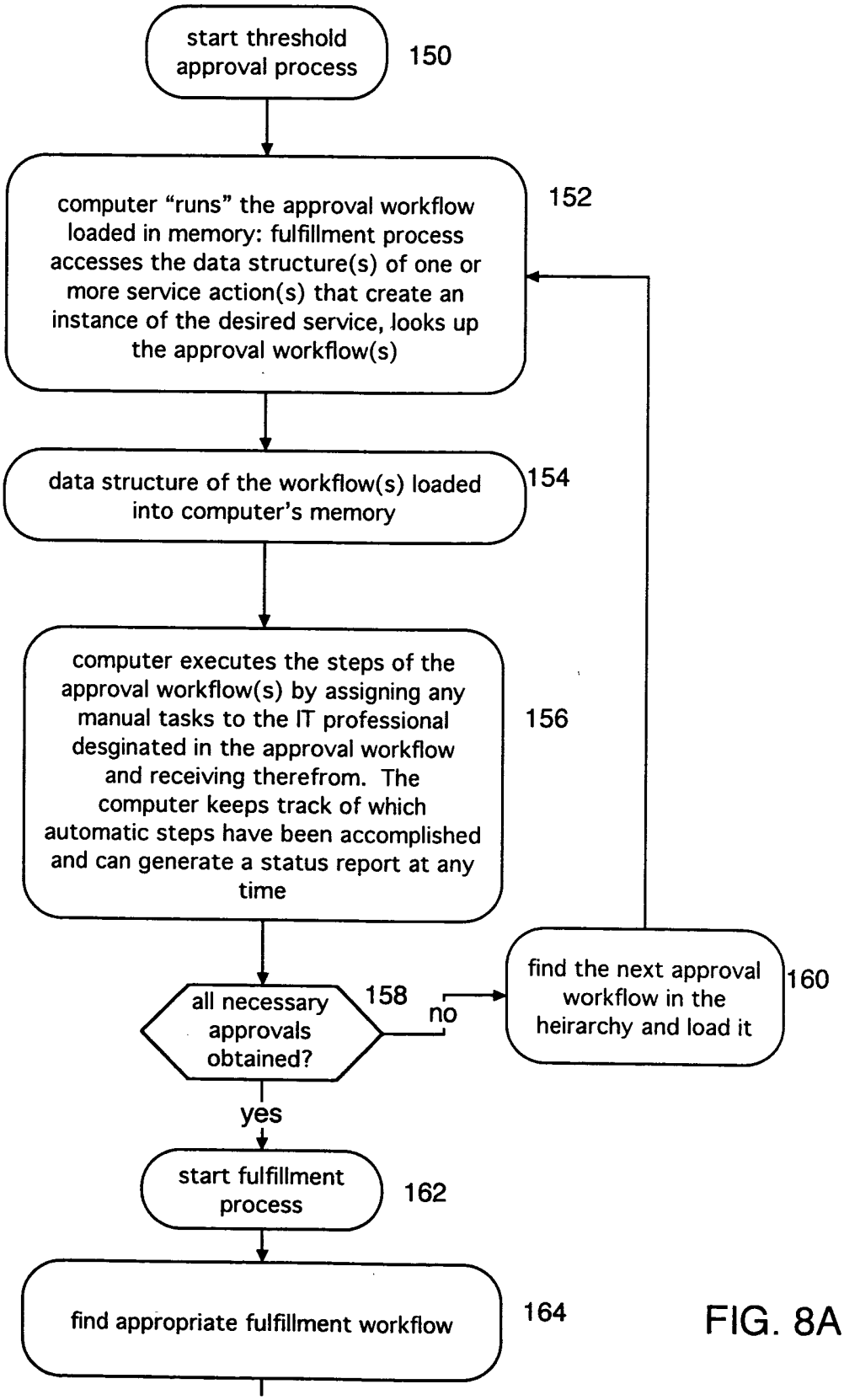


FIG. 8A

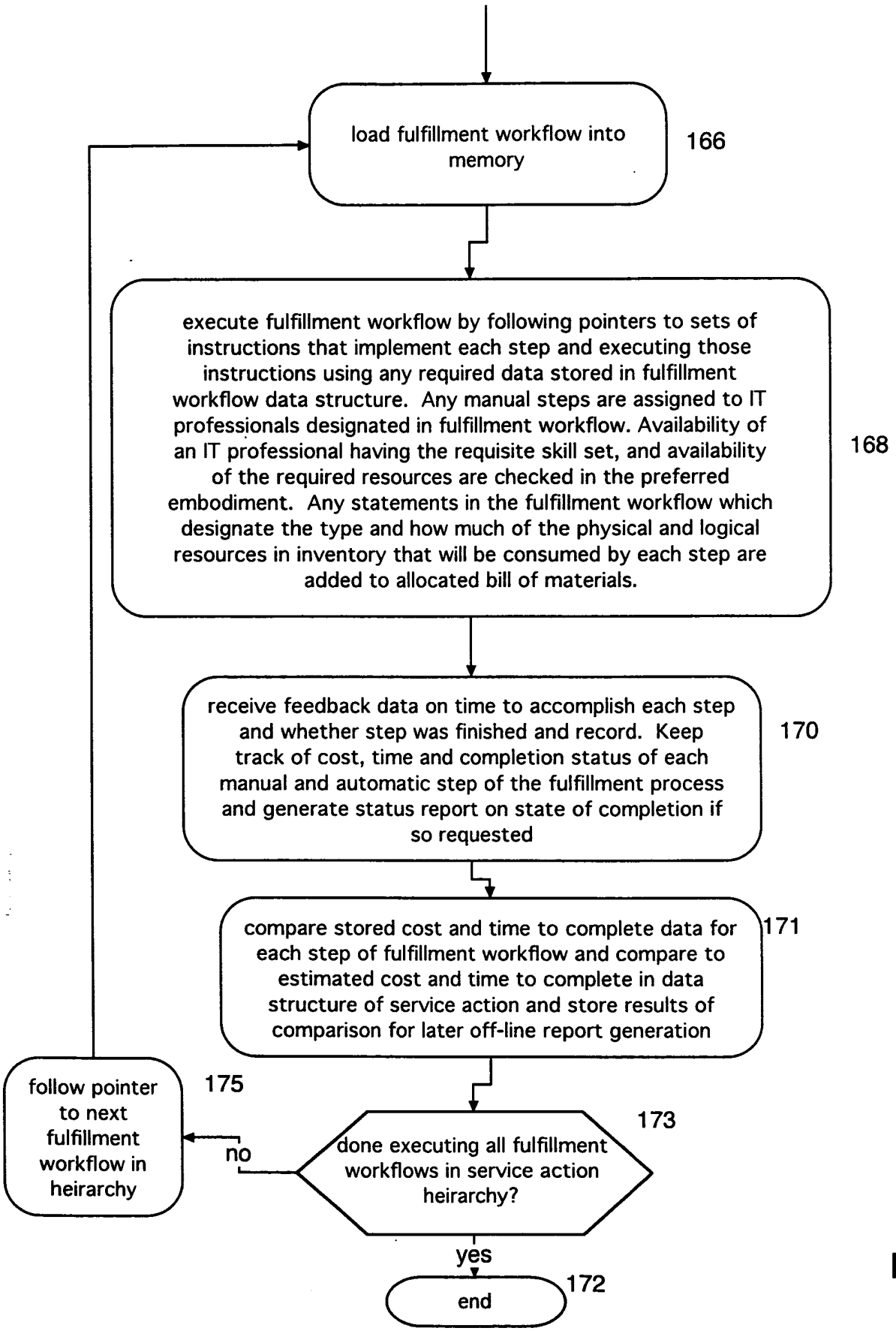

load fulfillment workflow into memory
166
execute fulfillment workflow by following pointers to sets of instructions that implement each step and executing those instructions using any required data stored in fulfillment workflow data structure. Any manual steps are assigned to IT professionals designated in fulfillment workflow. Availability of an IT professional having the requisite skill set, and availability of the required resources are checked in the preferred embodiment. Any statements in the fulfillment workflow which designate the type and how much of the physical and logical resources in inventory that will be consumed by each step are added to allocated bill of materials.
168
receive feedback data on time to accomplish each step and whether step was finished and record. Keep track of cost, time and completion status of each manual and automatic step of the fulfillment process and generate status report on state of completion if so requested
170
compare stored cost and time to complete data for each step of fulfillment workflow and compare to estimated cost and time to complete in data structure of service action and store results of comparison for later off-line report generation
171
done executing all fulfillment workflows in service action heirarchy?
173
no
follow pointer to next fulfillment workflow in heirarchy
175
yes
end
172

FIG. 8B